

Lessard, Edward T

From: Travis, Richard J
Sent: Tuesday, August 30, 2005 12:21 PM
To: Ganetis, George
Cc: Durnan, James T; Wu, Kuo-Chen; Lessard, Edward T; Petricek, Robert J; Travis, Richard J
Subject: FW: CRYOFAB Gaseous Helium Chiller Dewar

Follow Up Flag: Follow up
Due By: Monday, August 29, 2005 5:00 PM
Flag Status: Blue

George,
For scheduling purposes, are you planning to bring this before the LESHC Cryo Subcommittee?
Thanks,
Rich

-----Original Message-----

From: Durnan, James T
Sent: Thursday, August 18, 2005 5:12 PM
To: Ganetis, George; Lessard, Edward T; Wu, Kuo-Chen
Cc: Ribaud, Paul; Travis, Richard J; Ellerkamp, John J; Durnan, James T
Subject: CRYOFAB Gaseous Helium Chiller Dewar

The Superconducting Magnet Division is researching the purchase of two Ghe Chillers from CRYOFAB, Inc for use in Building 902. The initial quote came with a separate quote for an ASME "U" Stamp Testing and Documentation and for Impact Testing in accordance with ASME requirements, the second quote came with "Design Pressure Calculations for Gas Chiller" and referenced the ASME Sections of compliance in the calculation page. The question of whether BNL is required to have the ASME stamp on the Dewar or if the calculations showing compliance with the ASME code is sufficient, as implied by ESH Standard 5.1.0, section IV. General Requirements:

"Where applicable, all apparatus used in the storage and handling of cryogenic liquids shall meet the appropriate requirements of the Compressed Gas Association, the National Fire Protection Association, the American Petroleum and ASME Boiler and Pressure Vessel Code."

Also, this equipment meets the exception in paragraph D, Engineered Systems "Commercial vessels built to commercial standards and used exclusively for storage do not have to be reviewed." for review by the Cryogenic subcommittee of the LESHC.

Conclusion

My interpretation is that the stamp is required. The Dewar meets the definition of a pressure vessel and therefore has to meet the requirements of ESH Standard 1.4.1 "Pressurized Systems for Experimental Use" Section IV General Requirements, paragraph A:

"The design, construction, and modification of pressure vessels and systems required by this Guide shall comply with the ASME Boiler and Pressure Vessel Code, ASA Pressure Piping Standards, and/or the applicable ANSI Standards. In applications where the system cannot be designed or constructed strictly to the codes and standards listed above, engineering solutions shall be reviewed by a committee appointed by the Dept. Chairman to assure equivalent safety."

Since the Manufacturer can comply with ASME Code, the Magnet Division cannot use engineering solutions to assure equivalent safety.

The Laboratory Environmental, Safety and Health Committee is the BNL Organization that interprets and performs Cryogenic Safety Reviews, therefore, if you want further consideration of this question you can request consideration from the Committee.

Lessard, Edward T

From: Travis, Richard J
Sent: Thursday, September 22, 2005 9:24 AM
To: Lessard, Edward T
Cc: Ganetis, George; Marone, Andrew J; Petricek, Robert J; Travis, Richard J
Subject: RE: CRYOFAB Gaseous Helium Chiller Dewar

Follow Up Flag: Follow up
Flag Status: Blue

Attachments: RE: CRYOFAB Gaseous Helium Chiller Dewar

Ed,
I got a 9/1 email from George on this subject (attached) . I was out of the office for those two weeks and apparently forgot to forward it to you. My apology.
As background, George has it spec'd the Cryofab chiller as ASME. He has committed to bring it before the Committee after installation, but prior to use. I am tracking it and will followup with George in approx two months.

I have been inundated by the demands of the LTRA Transition. My other commitments have been deferred, but not forgotten. Additional LESHG actions on my plate:

- Status LESHG 05-02 per Andy Marone's request for a close out of LESHG 05-01 (BEPC - II magnet). Andy has been very patient. I will work on this tomorrow and get the status to you.
- Issue the draft minutes for LESHG 05-07 and the change the Guidelines Procedure
- Issue the draft minutes for LESHG 05-09

Rich



RE: CRYOFAB
seous Helium Cf

-----Original Message-----

From: Lessard, Edward T
Sent: Wednesday, September 21, 2005 1:20 PM
To: Travis, Richard J; Ganetis, George
Cc: Durnan, James T; Wu, Kuo-Chen; Petricek, Robert J
Subject: RE: CRYOFAB Gaseous Helium Chiller Dewar

Hi Folks:

I think George is correct in his interpretation and it also fits the interpretation one would arrive at if the new 10CFR851 is enacted.

Regards.

Ed

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